

Docket No. 10021239
USPTO Ser. No. 10/635,395

A Replacement Abstract is also included.

Replacement

Abstract

A method of measuring a DUT provides a vector network analyzer with at least two measurement ports and measures characteristics of thru, reflect, and line calibration standards at the measurement ports. Error coefficients are calculated as well as a shifted electrical length attributable to the measured calibration standards. S-parameters of the DUT are measured and corrected based upon the error coefficients. A reference plane is shifted for each element of the corrected S-parameter matrix to a measurement reference plane, and

$$\frac{\Gamma_{SA_portn}}{\Gamma_{LA_portm}} = S_{21_thru_nm} S_{12_thru_nm}$$

wherein $S_{21_thru_nm}$ is equal to $S_{12_thru_nm}$ and an argument of both solutions for $S_{21_thru_nm}$ is fit to a straight line, the solution having a y-intercept closest to zero being a correct solution and a resulting argument of the correct solution being the electrical delay.